

PROPOSED LEAKING UST (LUST) CASE CLOSURE

The Arizona Department of Environmental Quality (ADEQ) is considering closure of the following leaking underground storage tank (LUST) cases:

LUST Case File # 2530.03
Facility ID # 0-001960
Maricopa County

Brown Evans Distributing Co. (Mesa Cardlock)
1149 S. Sirrine
Mesa, Arizona 85210

This commercial property (the Site) is located at 1149 South Sirrine in Mesa. The Site operated as the former Brown Evans Distributing Mesa Cardlock facility. The Site operated from approximately 1984 until 2006 when the UST system was removed. Two LUST releases .01 and .02 have been closed. LUST release .03 was assigned to the northeast diesel dispenser. Site characterization activities were conducted and documented in the June 6, 2007 Site Characterization Report. Additional characterization activities were conducted and the Site Characterization Report was approved December 8, 2010. In 2011, EnCore Consulting, LLC (EC), on behalf of Brown Evans Distributing Co., conducted a Tier II risk Assessment was approved by ADEQ. The Tier II Risk Assessment indicated that “levels of residual contaminants were protective of human health and the environment for direct contact with shallow soils and indoor air vapor intrusion assuming a hypothetical residential use for the property.”

In December 2014, EC conducted a brief soil vapor extraction test at monitor well (MW-1) to evaluate the potential for light non-aqueous phase liquid (LNAPL). LNAPL historically has ranged in thickness in MW-1 between non-detectable and 0.53 feet. LNAPL has never been reported in the other three monitoring wells. Benzene and 1,2-dichloroethane (1,2-DCA) concentrations in groundwater have historically exceeded applicable regulatory standards in MW-1, MW-3 and MW-4. MW-2 has never shown any volatile organic compound (VOC) contamination concentrations over applicable regulatory standards.

Current data provided by the UST owner/operator, and all other available site information has been used by ADEQ to determine whether remaining levels of contaminants at the site are adequately protective of human health and the environment. A site specific risk assessment and detailed file/information search were also completed. VOC analytical groundwater results in MW-1 show some VOC concentrations remain above applicable Tier 1 Corrective Action Standards. The results for all other monitoring wells is available in the LUST file.

Based upon the results of remedial activities and site specific information, the above-referenced LUST site is eligible for alternative LUST closure under Arizona Revised Statutes (A.R.S.) §49-1005(E). Arizona Administrative Code (A.A.C.) R18-12-263.04 allows case closure of a LUST site with groundwater contamination above the Arizona Aquifer Water Quality Standards (AWQS) or Tier 1 Corrective Action Standards. ADEQ has considered the results of a site specific assessment and the rule specific criteria below:

1. *Threatened or impacted drinking water wells:* According to the Arizona Department of Water Resources (ADWR) records, there are no threatened or impacted drinking water wells within 1/2 mile of the site. There is one abandoned City of Mesa exempt registered well (55-482547), and 20 wells

registered as monitor or other. According to the City of Mesa's webpage, about 91 percent of Mesa's water comes from surface water sources, the [Salt River Project Canal System](#) and the [Central Arizona Project Canal](#). Nine percent of Mesa's water comes from more than 30 ground water wells that can provide 83 million gallons of water per day. The groundwater contamination at the Site is found in the top portion of the Upper Alluvial Unit. The City of Mesa draws its potable water from the Middle Alluvial Unit at depths greater than 300 feet. There are no Groundwater Protection Level exceedances in the soil data collected, which indicates there is no remaining soil contamination that poses a leachability threat to the groundwater. ADEQ sent the City of Mesa a Water Provider Questionnaire with the request that it be completed and returned within 30 days. ADEQ has not received a response from the City of Mesa.

2. *Other exposure pathways:* Soil samples collected at the site between 2006 and 2016 show no contamination present over applicable regulatory standards (residential SRL or GPL). Incidental dermal contact with the groundwater is considered *de minimis* risk. In a ¼ mile receptor survey, there are no schools, day care centers, hospitals or other sensitive populations. According to ADWR, there are two Salt River Project non-exempt wells located within ½ mile of the site. One well is currently used for irrigation purposes, and the other well does not pump. ADEQ sent Salt River Project (SRP) a Water Provider Questionnaire which is attached.

3. *Groundwater plume stability:* Groundwater plume stability is demonstrated by the remaining VOC contamination present over a regulatory standard is limited to MW-1, the source well. A statistical trend analysis of dissolved benzene and 1,2-DCA collected between 2008 and 2017 for all groundwater monitoring wells was conducted using the GSI Mann-Kendall spreadsheet. The data indicates that the benzene plume is "decreasing" in MW-1 and MW-4 and "stable" in MW-2 and MW-3. The 1,2-DCA plume is "stable" in MW-1 and MW-3, "probably decreasing" in MW-4 and "no trend" in MW-2. 1,2-DCA is a recalcitrant compound, so these results are not abnormal. MW-4 has not shown any VOC contamination present over an applicable regulatory standard since April 2014. MW-3 has not shown any VOC contamination present over an applicable regulatory standard since March 2015. When the VOC contamination concentrations were the highest, the depth to groundwater was between 105 and 110 feet bgs. The current level of the groundwater is within these depths, and the VOC contamination concentrations are a magnitude less. MW-2 has never shown any VOC contamination present over an applicable regulatory standard. The groundwater plume does not extend off site based on historic groundwater data collected.

4. *Characterization of the groundwater plume:* Historic groundwater data is available from 2009 to 2017 for the four monitoring wells. The depth to water is approximately 106 feet below ground surface (bgs). Dissolved-phase petroleum hydrocarbons have been characterized since 2010. MW-1 has had VOC contamination (benzene and 1,2-DCA) present over an applicable regulatory standard off and on since 2007.

5. *Natural Attenuation:* The VOC contamination is present only in MW-1. Groundwater field data shows that natural attenuation is occurring as biodegradation. In 2016, groundwater samples were analyzed for typical monitored natural attenuation indicator compounds. BIOSCREEN (Version 1.3) was used to simulate natural attenuation of dissolved CoC concentrations found in MW-1. The model results indicate that VOC concentrations will continue to degrade to less than applicable regulatory standards within 10 years and the plume will move no more than 1,000 feet from the source.

6. *Removal or control of the source of contamination:* Source control has been completed by the UST system being permanently closed in June 2006. The secondary source of hydrocarbons remaining in groundwater has been effectively reduced through natural attenuation.

7. *Requirements of A.R.S. §49-1005(D) and (E):* The results of the corrective action completed at the site assure protection of public health, welfare and the environment, to the extent practicable, the clean-up activities completed at this site allow for the maximum beneficial use of the site, while being reasonable, necessary and cost effective.

8. *Other information that is pertinent to the LUST case closure approval:* The facility and LUST files were reviewed for information regarding prior cleanup activities, prior site uses and operational history of the UST system prior to removal.

Groundwater data for MW-1

Date	Benzene AWQS is 5 µg/L	1,2-DCA AWQS is 5 µg/L	Depth to water (feet)
10/17/2007	6.6	4.1	116.12
5/6/2008	180	10.0	110.21
8/11/2008	140	13.0	106.52
11/10/2008	190	34.0	105.5
10/28/2009	16	5.6	102.00
2/5/2010	21	12.0	102.68
7/8/2010	3.6	1.4	97.10
5/10/2011	14.7	8.29	91.42
9/12/2012	51.7	31.9	102.46
12/11/2014	<0.500/10.5	<0.500/2.94	113.71
8/31/2015	<0.500	<0.500	114.03
11/4/2016	4.15	5.01	110.72
6/30/2017	7.76	27.1	108.58

Site specific information concerning this closure is available for review during normal business hours at the ADEQ Records Center <http://www.azdeq.gov/function/assistance/records.html>, 1110 W. Washington St., Suite 140, Phoenix, AZ 85007. ADEQ welcomes comments on the proposed LUST case closure. Please call the Records Center at 602-771-4380 to schedule an appointment. A 30-day public comment period is in effect commencing **March 13, 2018 and ending April 13, 2018**. Comments should be submitted in writing to the Arizona Department of Environmental Quality, Waste Programs Division, and Attention: Heather Flowers, 1110 W. Washington Street, Phoenix, AZ 85007.

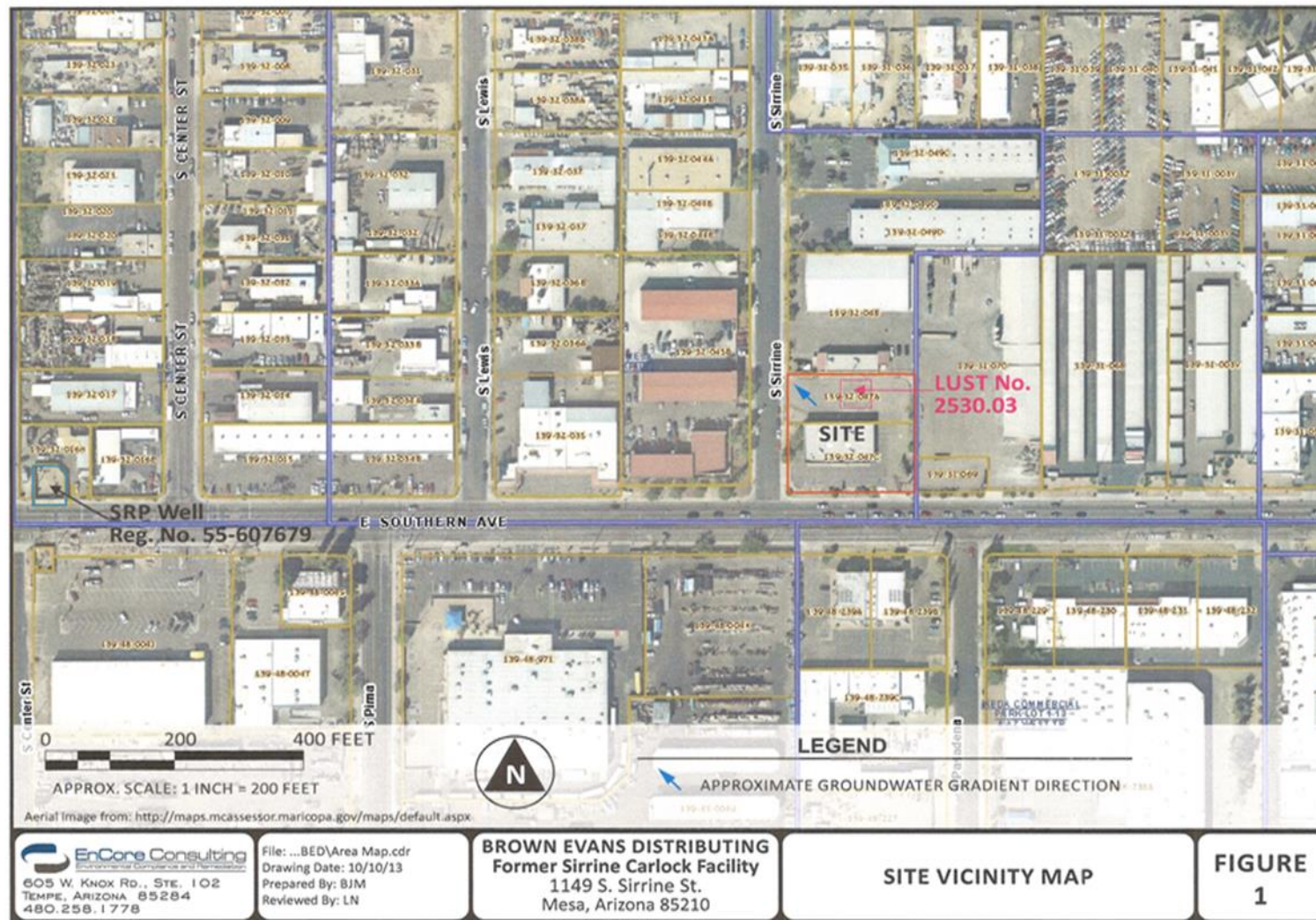
If sufficient public interest is demonstrated during the public comment period, ADEQ may announce and hold a public meeting. ADEQ will consider all submitted written comments and reserves the right to respond to those comments following the public comment period. For more information on this notice, please contact the Case Manager, Heather Flowers (602) 771-4551 or at hf2@azdeq.gov. You may also contact the Sr. Risk Assessor, Debi Goodwin at (602) 771-4453 or at dgl@azdeq.gov.

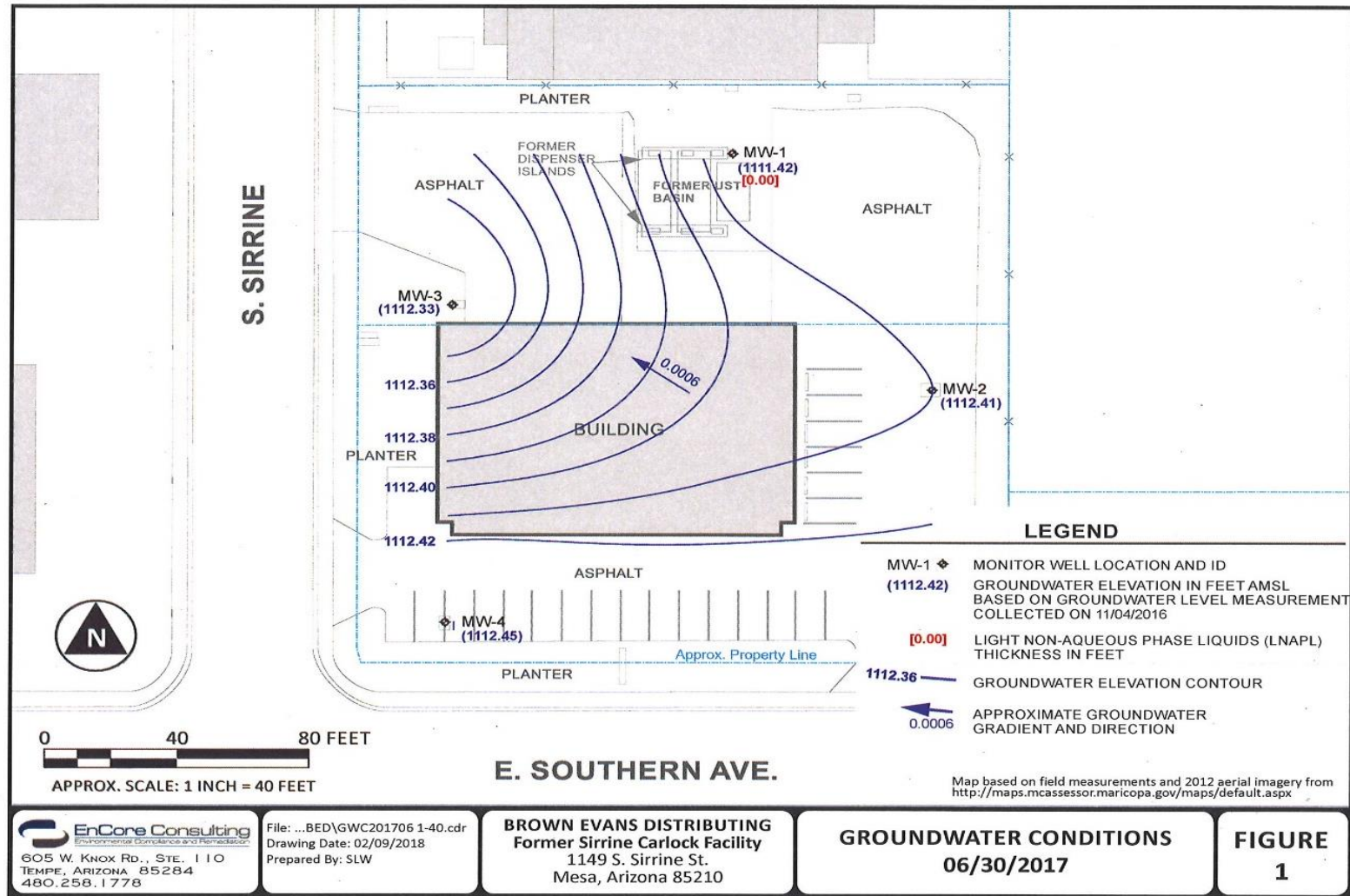
Copies of the cited statutes and rules can be found at:

<http://www.azleg.gov/ArizonaRevisedStatutes.asp?Title=49>, and
http://www.azsos.gov/public_services/Title_18/18-12.htm

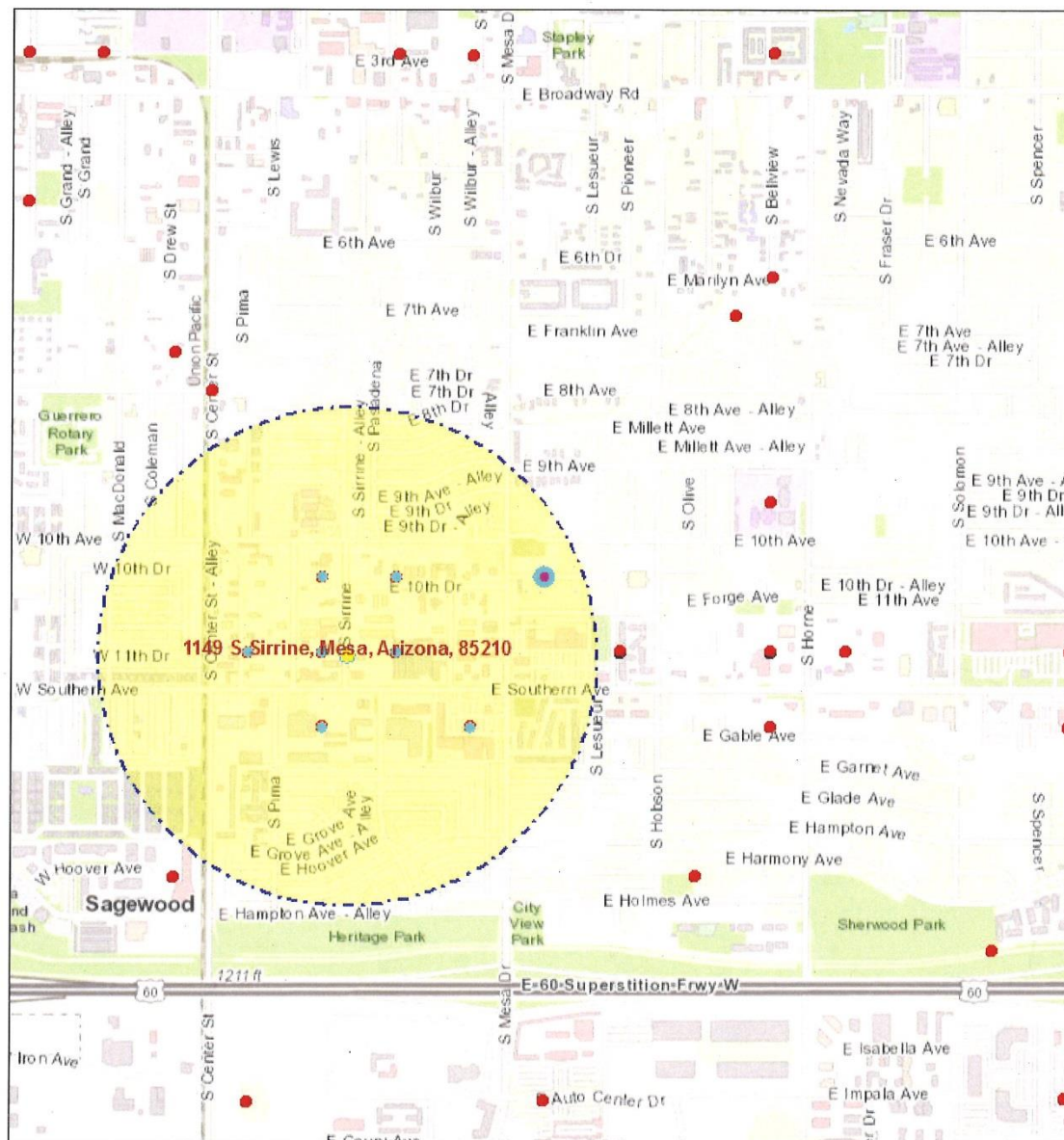
ADEQ will take reasonable measures to provide access to department services to individuals with limited ability to speak, write, or understand English and/or to those with disabilities. Requests for language interpretation services or for disability accommodations must be made at least 48 hours in advance by contacting: 7-1-1 for TDD; (602) 771-2215 for Disability Accessibility; or Ian Bingham, Title VI Nondiscrimination Coordinator at (602) 771-4322 or idb@azdeq.gov.

ADEQ tomará medidas razonables para proveer acceso a los servicios del departamento para personas con capacidad limitada para hablar, escribir o entender Inglés y / o para las personas con discapacidad. Las solicitudes de servicios de interpretación del lenguaje o de alojamiento de discapacidad deben hacerse por lo menos 48 horas de antelación poniéndose en contacto con Ian Bingham, Title VI Nondiscrimination Coordinator al (602) 771-4322 o idb@azdeq.gov.





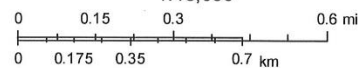
Brown Evans Cardlock



March 2, 2018

- Well Registry
□ County

1:18,056



Arizona Department of Water Resources
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Arizona Department of Water Resources



**ARIZONA DEPARTMENT
OF ENVIRONMENTAL
QUALITY**

*Email completed
form to (preferred):*
DG1@azdeq.gov

Or mail completed form to:
UST-LUST Section
1110 W Washington St
Phoenix, AZ 85007

GROUNDWATER USE QUESTIONNAIRE

LUST FACILITY NAME former Brown Evans Mesa Cardlock
ADDRESS 1149 South Sirrine, Mesa 85210
LUST FACILITY ID 0-001960
LUST CASE NO 2530.03

Please answer all questions. Mark "UNK" if the answer is unknown to you at the time of completion. Please attach any additional pages as needed.

Water user municipality/utility name: Salt River Project
Date Questionnaire was completed: February 26, 2018
Contact Name: Andrea Martinez
Title: Principal Environmental Compliance Engineer
Address: Environmental Compliance and Permitting
PAB 359 P. O. Box 52025, Phoenix AZ 85233
Phone Number: 602-236-2618
Email address: andrea.martinez@srpnet.com

1. Please indicate current or near future anticipated groundwater development by the municipality/utility within 1 mile of the above named LUST site.

SRP owns and operates water conveyance structures and groundwater supply wells 27.5E-1N (immediately adjacent to the LUST site) and 28.5E-1N (one-mile east of the LUST site) that produce and convey water for its shareholders. For near future anticipated groundwater development, see question number two below response.

Groundwater Use Questionnaire

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2. What is the future use (up to 100 years) for groundwater within 1 mile of the above named LUST site?

SRP anticipates all its properties in the vicinity of the subject area, including the groundwater supply wells and the conveyance structures will remain in continuous use over the next 100 years. Additionally, SRP anticipates that its supply wells that are in the vicinity will transition from irrigation to municipal service (potable supply) within this time period.

3. Is the municipality/utility currently sampling groundwater wells within 1 mile of the above named LUST site? If so, how often is the sampling conducted? Are analytical results being submitted electronically to ADEQ's the groundwater database? If not, will you share the data with ADEQ?

SRP conducts routine groundwater sampling from its wells when possible. Water quality records are submitted electronically to the ADEQ groundwater database.

4. Are there any groundwater wells owned by the water provider that are known to have been affected by the above named LUST site? If so, please list the ADWR well identification numbers. What is the current status of these wells (e.g. shut down, still pumping)?

27.5E-1N (immediately adjacent to the LUST site), ADWR #55-607679, no known impact of contaminants that SRP tests for, current status is active. 28.5E-1N (one-mile east of the LUST site), ADWR #55-617845, no known impact of contaminants that SRP tests for, current status is active. 28E-1N (1/4-mile east of the LUST site), ADWR #55-701534, no recent water quality data, current status is inactive/abandoned/capped. Note: This well was drilled in 1939, according to the ADWR imaged record database there was a late registration filed and it was supposed to be abandoned/capped around 1951, however the imaged record is stamped with void/cancelled. SRP could not find any other records of abandonment. The last pump and water level data on file was through 1954.

5. What is the future use (up to 100 years) for any wells that have been impacted by the above named LUST site?

N/A, no known impacts of contaminants that SRP tests for in either well.

6. Is there any other information you wish to provide to assist ADEQ in the LUST case closure evaluation of this site?

All of SRP's groundwater supply wells in the vicinity of the central Mesa are anticipated to remain in use over the next 100 years. SRP delivers nearly 800,000 acre-feet of water per year to the metro Phoenix area. In normal run off years, most of this is supplied from surface water coming from the Salt and Verde Rivers. However, in dry years, groundwater must be pumped to supplement the surface water supplies. SRP's water supply wells are a critical resource especially in drought conditions and it is very important to SRP that it have a reliable supply of water to meet customer and shareholder needs.